

CDF Analysis Diskpool Status

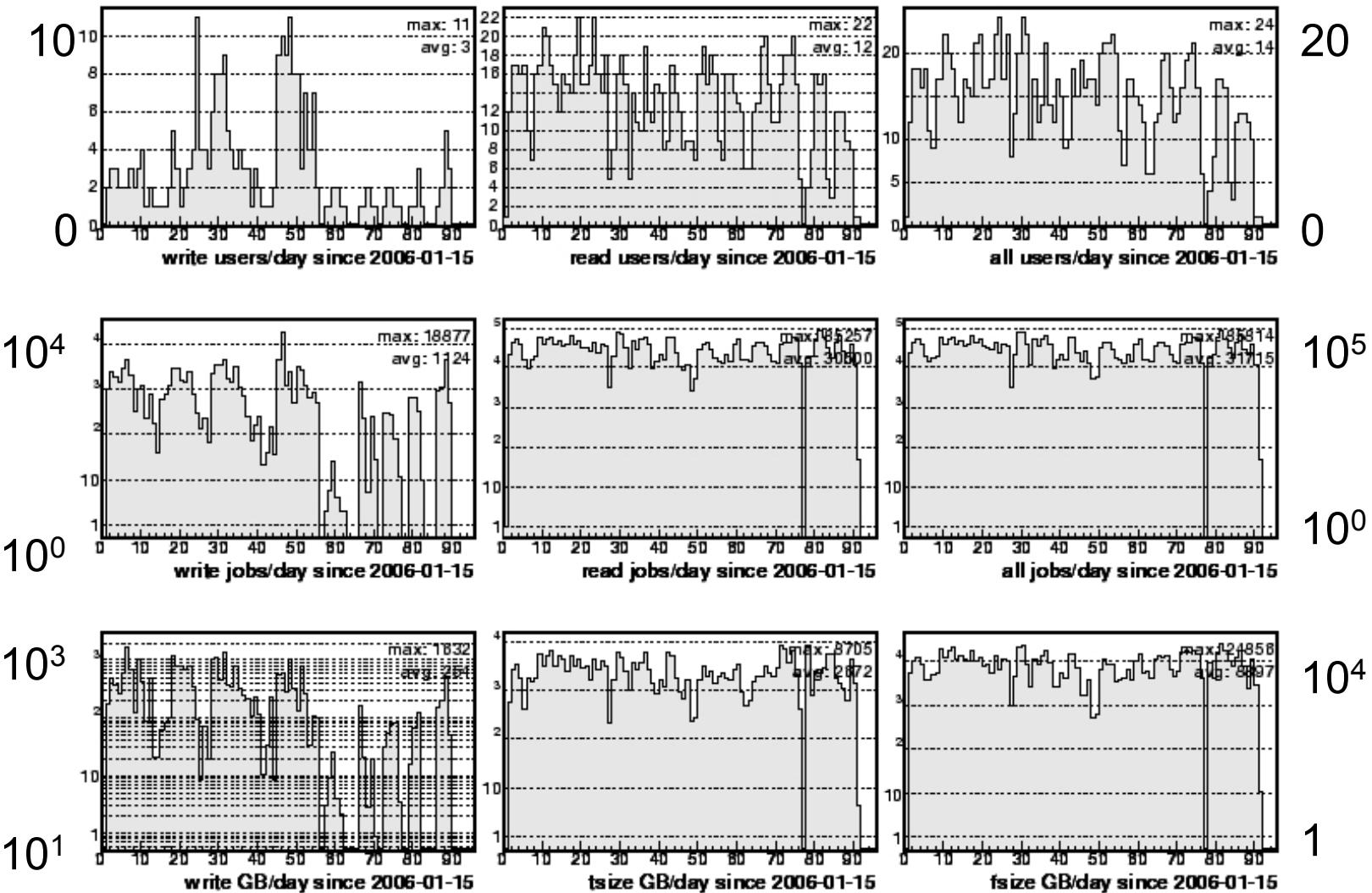
Dave Ambrose, Doug Benjamin and
Alexei Varganov

- Example of CDF needs
- Use Case analysis
 - Analysis of Billing and door DB's
- System tests
 - fileserver rate tests
 - Pnfs database rate tests
- Plans

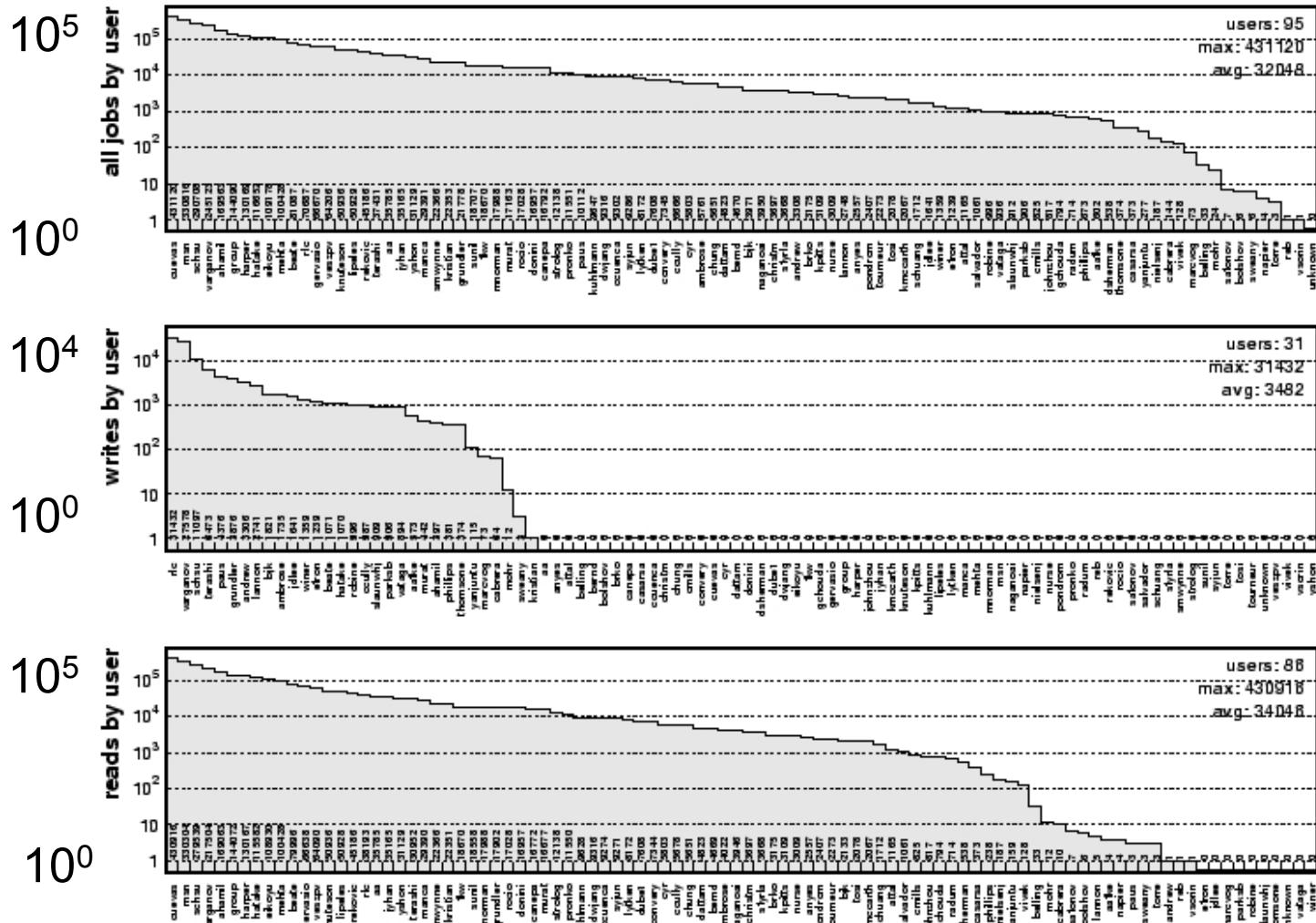
Examples of CDF needs

- Rootd fileservers
 - CDF currently is using 69 rootd fileservers
 - 51 must retire before Dec 06 (> 4 years old)
 - Space inefficiently used (stale data)
 - Can not easily manage the space
- Large Scratch space for physics group work
 - Top group in process of making TopNtuple for Summer '06 analysis
 - Need temp. buffer space for output before merging and writing to tape.
 - Using partition in large fileserver (inefficient use of space- one partition filled up and output lost - need to rerun some sections) Analysis pool would have helped here

Daily diskpool usage

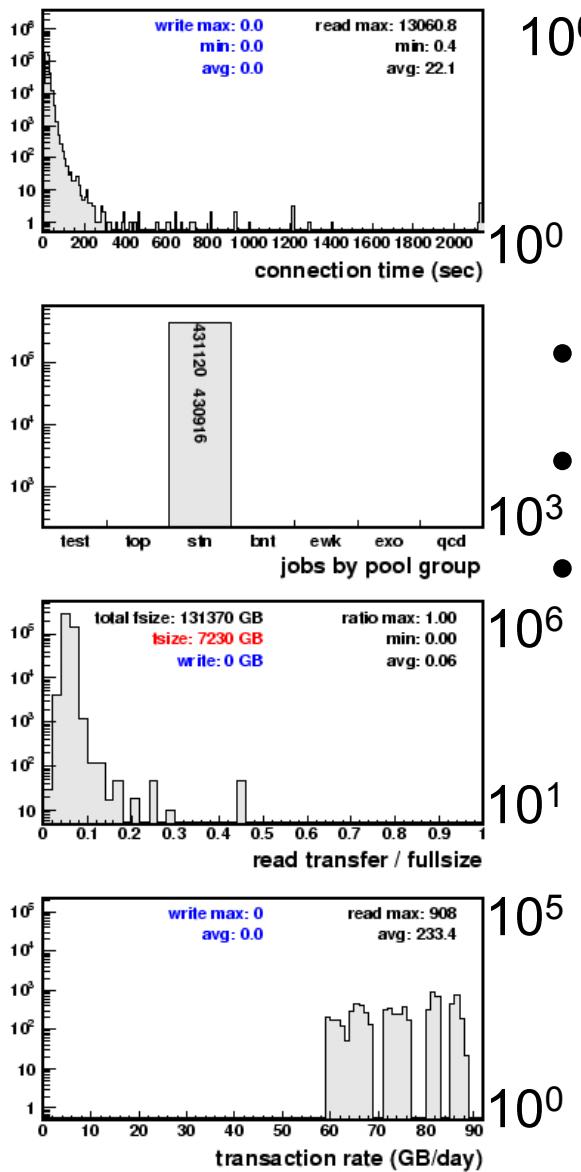
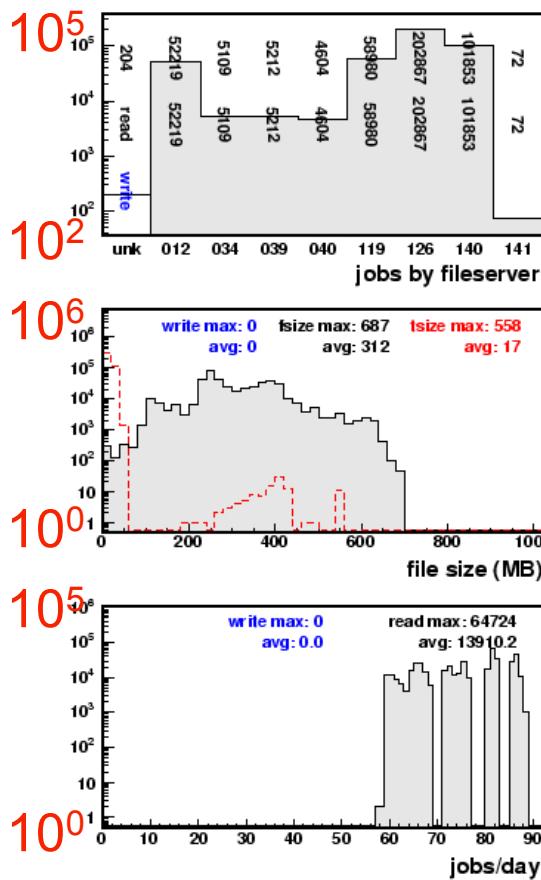


jobs by user (Total/write/read)



D. Ambrose

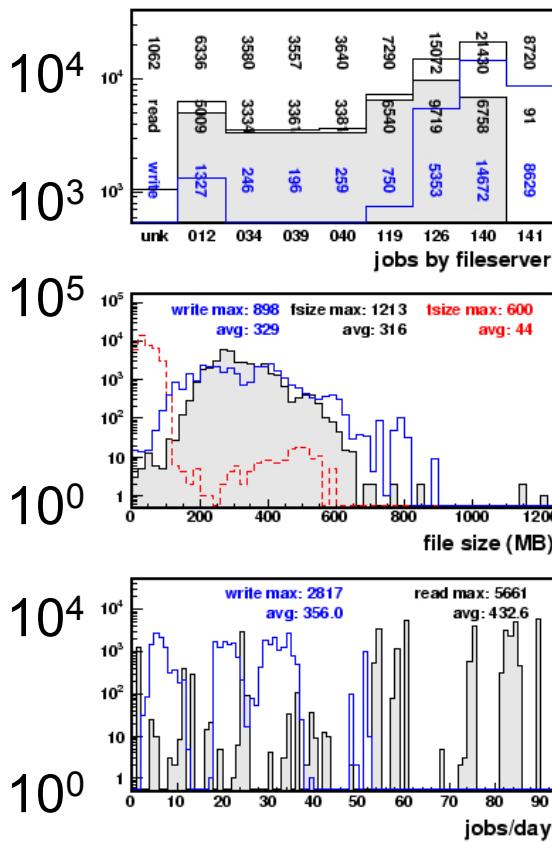
Name: **F.Javier Cuevas**
 User: cuevas (no mail)
 Jobs: 431120 total, 0 write, 430916 read
 → cuevas@FNAL.GOV (310,0,310)
 → cuevas.cdf/h2caf@FNAL.GOV (430810,0,430606)
 Dates: 31.0 day span (13916.8 jobs/day)
 → 2006-03-13 07:06:20.962 (first)
 → 2006-04-13 07:35:14.108 (last)
 Files used: 15560 total, 0 written, 15560 read



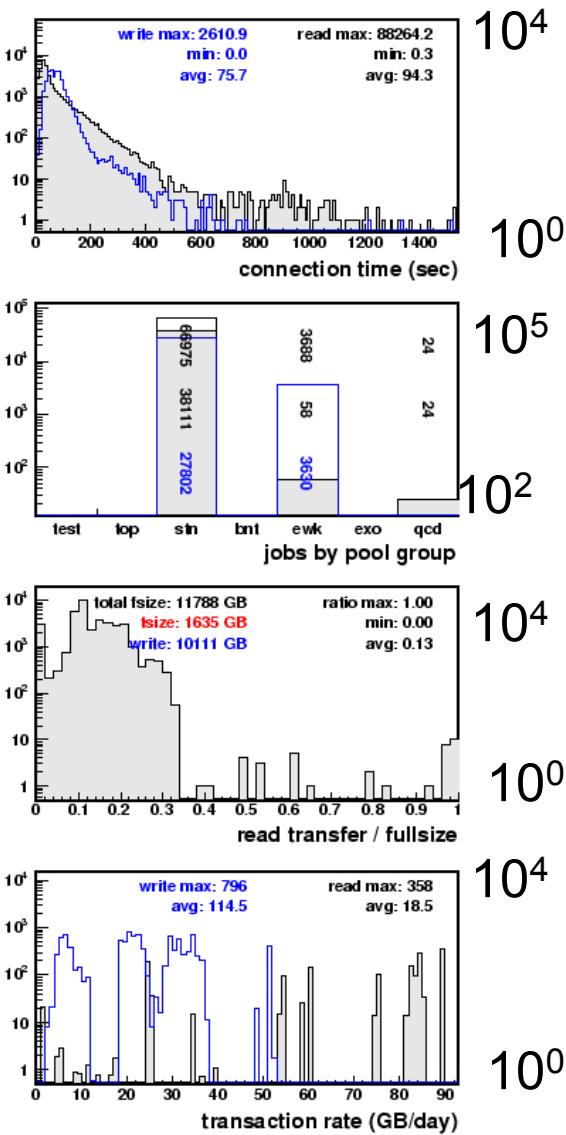
Example user profile

- Most prolific user
- Reading only
- ntuples

Name: Raymond Culbertson
User: rlc (rlc@fnal.gov)
Jobs: 70887 total, 31432 write, 38193 read
 → rlc@**FNAL.GOV** (23210,7,23203)
 → rlc/cron/fcdflnx8.fnal.gov@**FNAL.GOV** (13998,13513,0)
 → rlc/cron/fcdflnx4.fnal.gov@**FNAL.GOV** (8107,7778,0)
 → rlc/cron/fcdflnx7.fnal.gov@**FNAL.GOV** (10348,10134,0)
 → rlc/cdf/h2caf@**FNAL.GOV** (15024,0,14990)
Dates: 88.3 day span (800.7 jobs/day)
 → 2008-01-16 18:35:08.007 (first)
 → 2008-04-15 00:20:24.874 (last)
Files used: 42443 total, 31432 written, 11803 read



GDM May 9 2006

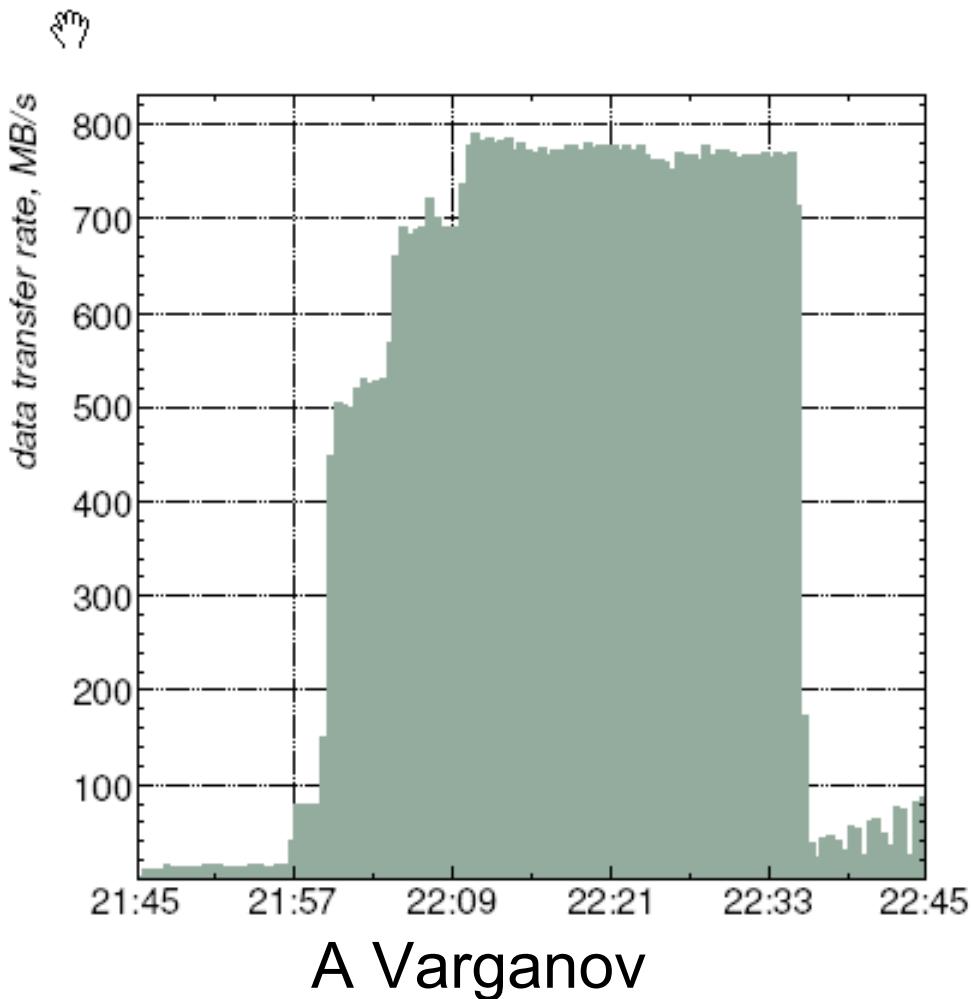


CDF Analysis diskpool status - D Benjamin

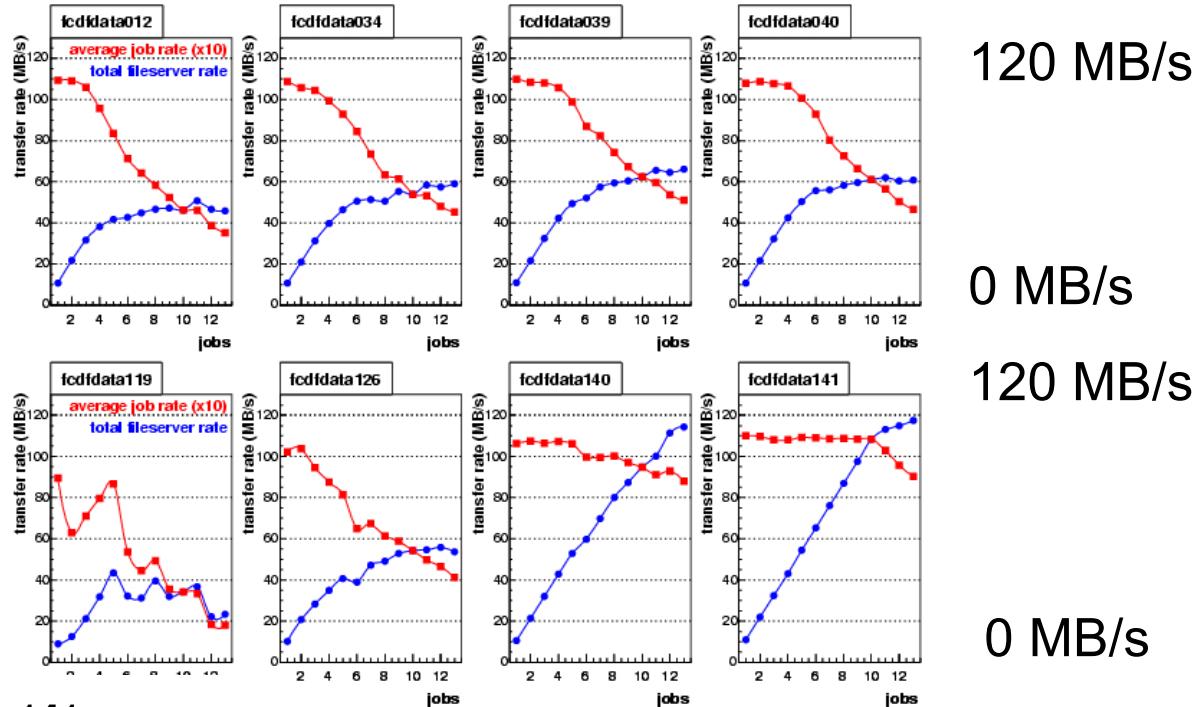
- Most prolific writer
- Writing ntuples
- Reading ntuples

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System testing



Various fileservers



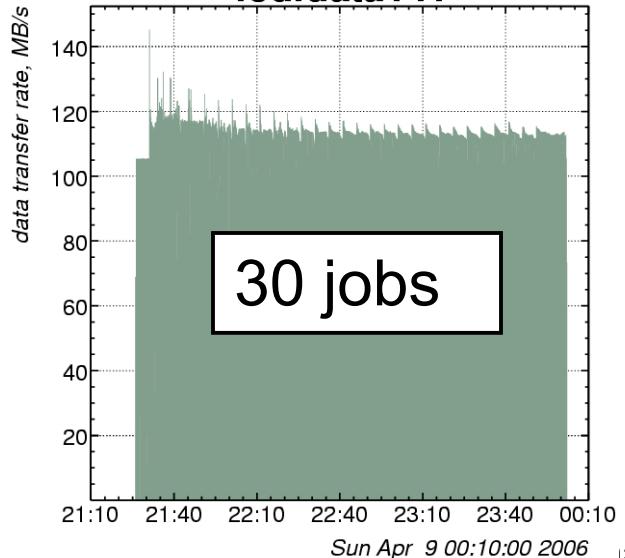
120 MB/s

0 MB/s

120 MB/s

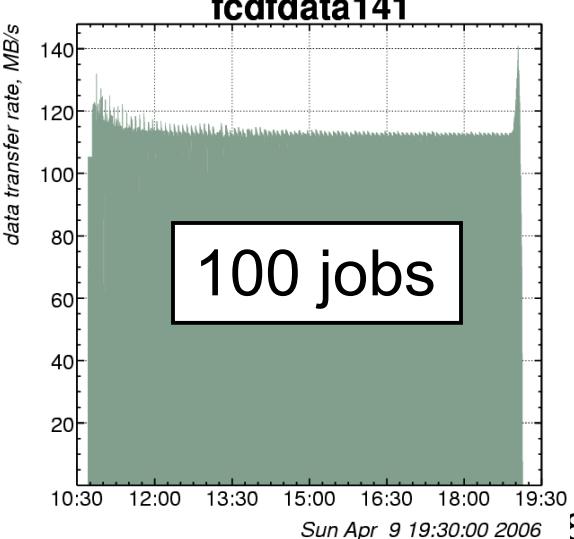
0 MB/s

fcdodata141



D Ambrose

A Varganov



PNFS bandwidth testing

- Used both dCache prestage command and root Tfile open to make measurements.
- Found response linear up to ~ 500 simultaneous clients ~ 0.1 secs per Tfile open
- dCache Doors (currently only 13) saturated during test
- **Automatically recovered** when test finished

Plans

- Summarize user use case profiles next week (interviewed 10 users)
- Plan for first formal preproduction readiness review week within one month
 - Starting to write formal review charge in conjunction with Spokespersons/ Offline heads
 - Determine committee membership